AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method for carrying out surface plasmon resonance measurement, in which method

a beam of electromagnetic radiation is produced by a source of electromagnetic radiation,

the beam of electromagnetic radiation is directed through a prism onto a material layer in an angle of incidence, which material layer at least partly covers a planar surface of the prism,

a surface plasmon resonance phenomenon is caused,

a beam of reflected electromagnetic radiation is produced and directed by the surface through the prism and further to a detector for detecting the level of intensity of the beam of reflected electromagnetic radiation,

the change of the level of intensity of the beam of reflected electromagnetic radiation, caused by the surface resonance phenomenon, is measured, and

the beam of reflected electromagnetic radiation being reflected with a mirror to the detector, wherein the angle of incidence is varied to cause the surface plasmon resonance phenomenon by at least one of:

i) rotating the prism and the mirror together with respect to the source of electromagnetic radiation and the detector, and

ii) rotating the source of electromagnetic radiation and the detector together

with respect to the prism and the mirror,

wherein the rotating of the prism and the mirror together with respect to the source of electromagnetic radiation and the detector comprises rotating the prism and the mirror each to a same first angle, so as to cause the surface plasmon resonance phenomenon, and

wherein the rotating of the source of electromagnetic radiation and the detector together with respect to the prism and the mirror comprises rotating the source and the detector each to a same second angle, so as to cause the surface plasmon resonance phenomenon.

2. (Previously Presented) A method as claimed in claim 1, wherein a planar mirror is used as the mirror to reflect the beam of reflected electromagnetic radiation, and

the planar mirror being arranged in plane parallel relation to the planar surface.

3. (Original) A method as claimed in claim 1, wherein the source of electromagnetic radiation is a laser.

4. (Previously Presented) A method as claimed in the claim 1, wherein the material layer comprises a metal film.

5. (Previously Presented) A method as claimed in claim 1, wherein the prism is a semi-cylindrical prism having a planar surface, which has a longitudinal

midline, and

the beam of electromagnetic radiation is directed onto the longitudinal midline.

6-9. (Cancelled)

10. (Previously Presented) A method as claimed in claim 1,

wherein a sensor for detecting the presence of analytes in a sample is arranged in functional contact with the material layer, the sensor comprising biomolecules capable of binding a specific analyte to the biomolecules, and being configured to cause a change on the material layer to which the sensor is in functional contact, the change being indicative of an increase of analyte bound to the biomolecules, and wherein the method further comprises:

receiving a sample containing analytes at the sensor,

causing analytes to bind to the biomolecules,

causing a change in the material layer, and

causing a change in the resonance phenomenon and the reflected electromagnetic radiation indicative of the presence of analytes in the sample fed to the sensor.

11. (Currently Amended) A device for carrying out surface plasmon resonance measurement, the device comprising

a source of electromagnetic radiation for producing and directing a beam of electromagnetic radiation through a prism onto a material layer such that the electromagnetic radiation meets the material layer at an angle of incidence enabling

a surface plasmon resonance phenomenon, wherein:

the material layer at least partly covers a planar surface of the prism,

the planar surface is adapted to produce a beam of reflected electromagnetic radiation, which is reflected through the prism and further to a detector for detecting the level of intensity of the beam of reflected electromagnetic radiation,

the device further comprises a mirror for reflecting the beam of reflected electromagnetic radiation to the detector; and

a rotating arrangement for varying the angle of incidence to cause the surface plasmon resonance phenomenon by at least one of:

i) rotating the prism and the mirror together with respect to the source of electromagnetic radiation and the detector, and

ii) rotating the source of electromagnetic radiation and the detector together with respect to the prism and the mirror,

wherein the rotating arrangement, when rotating the prism and the mirror together with respect to the source of electromagnetic radiation and the detector, is configured to rotate the prism and the mirror to a same first angle so as to cause the surface plasmon resonance phenomenon, and

wherein the rotating arrangement, when rotating the source of electromagnetic radiation and the detector together with respect to the prism and the mirror, is configured to rotate the source and the detector to a same second angle so as to cause the surface plasmon resonance phenomenon.

12. (Previously Presented) A device as claimed in claim 11, wherein the mirror is a planar mirror, and

the planar mirror and the planar surface of the prism are arranged substantially parallel to each other.

13. (Original) A device as claimed in claim 11, wherein the source of electromagnetic radiation is a laser, and

the beam of electromagnetic radiation and the beam of reflected electromagnetic radiation are laser beams.

14. (Previously Presented) A device as claimed in claim 11, wherein the material layer comprises a metal film.

15. (Original) A device as claimed in claim 11, wherein the prism is a semi-cylindrical prism.

16. (Cancelled)

17. (Previously Presented) A device as claimed in claim 11, wherein the source of electromagnetic radiation and the detector are mechanically fixed to each other.

18. (Cancelled)

19. (Cancelled)

20. (Previously Presented) A device as claimed in claim 11, wherein the prism and the mirror are mechanically fixed to each other.

21. (Cancelled)

22. (Previously Presented) A device as claimed in claim 11, comprising a sensor for detecting the presence of analytes in a sample, the sensor being in functional contact with the material layer, the sensor comprising biomolecules capable of binding a specific analyte to the biomolecules, and being configured to cause a change on the material layer to which the sensor is in functional contact, wherein the change is indicative of an increase of analyte bound to the biomolecules.

23. (Previously Presented) A method as claimed in claim 4, wherein the metal film comprises Au.

24. (Previously Presented) A device as claimed in claim 14, wherein the metal film comprises Au.

25. (Currently Amended) A method for carrying out surface plasmon resonance measurement, the method comprising:

producing a beam of electromagnetic radiation by a source of electromagnetic radiation,

directing the beam of electromagnetic radiation through a prism onto a material layer in an angle of incidence, which material layer at least partly covers a

planar surface of the prism, such that a resonance phenomenon is caused,

producing and directing a beam of reflected electromagnetic radiation by the surface through the prism and to a detector configured to detect the level of intensity of the beam of reflected electromagnetic radiation,

measuring the change of the level of intensity of the beam of reflected electromagnetic radiation, caused by the surface resonance phenomenon,

reflecting the beam of reflected electromagnetic radiation with a mirror to the detector, and

altering the angle of incidence to cause a surface plasmon resonance phenomenon by at least one of:

i) rotating the prism and the mirror together with respect to the source of electromagnetic radiation and the detector, and

ii) rotating the source of electromagnetic radiation and the detector together with respect to the prism and the mirror,

wherein the rotating of the prism and the mirror together with respect to the source of electromagnetic radiation and the detector comprises rotating the prism and the mirror each to a same first angle, so as to cause the surface plasmon resonance phenomenon, and

wherein the rotating of the source of electromagnetic radiation and the detector together with respect to the prism and the mirror comprises rotating the source and the detector each to a same second angle, so as to cause the surface plasmon resonance phenomenon.

26. (Currently Amended) A device for carrying out surface plasmon resonance measurement, the device comprising:

a prism,

a material layer at least partly covering a planar surface of the prism,

a source of electromagnetic radiation configured to produce and direct a beam of electromagnetic radiation through the prism onto the material layer such that the electromagnetic radiation meets the material layer at an angle of incidence enabling a surface plasmon resonance phenomenon,

a detector configured to detect the level of intensity of a beam of reflected electromagnetic radiation produced at the planar surface, the beam being reflected through the prism,

a mirror configured to reflect the beam of reflected electromagnetic radiation to the detector

a rotation mechanism configured to alter the angle of incidence to cause the surface plasmon resonance phenomenon by at least one of:

i) rotating the prism and the mirror together with respect to the source of electromagnetic radiation and the detector, and

ii) rotating the source of electromagnetic radiation and the detector together with respect to the prism and the mirror,

wherein the rotation mechanism, when rotating the prism and the mirror together with respect to the source of electromagnetic radiation and the detector, is configured to rotate the prism and the mirror to a same first angle so as to cause the surface plasmon resonance phenomenon, and

wherein the rotation mechanism, when rotating the source of electromagnetic

radiation and the detector together with respect to the prism and the mirror, is configured to rotate the source and the detector to a same second angle so as to cause the surface plasmon resonance phenomenon.

27-30. (Cancelled)